

Quick Installation Guide

For the PTZ Dome Controller



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INTRODUCTION

This quick-start guide is written for the QD6531Z and QD6505P speed dome cameras with remote control and was accurate at the time it was completed. However, because of our ongoing effort to constantly improve our products, additional features and functions may have been added since that time. We encourage you to visit our website at www.Q-See.com to check for the latest firmware updates and product announcements.

This guide is intended to assist you in adding the remote control function to your camera. Complete instructions on setting up your PTZ camera itself are included in the accompanying user manual for your camera.

Throughout the manual we have highlighted warnings and other important information that will assist you in operating your new system in a safe and trouble-free manner. Please take the time to read and follow all instructions and pay attention to alerts as shown below:

**IMPORTANT!** Red boxes with this icon indicate warnings. To prevent possible injury or damage to the product, read all warnings before use.

**NOTE!** Text in blue boxes with the Information icon offer additional guidance and explanations about how to make the most out of your system.

About PTZ

The term “PTZ” means Pan-Tilt-Zoom, and describes a camera that can rotate, elevate and zoom in on a subject. Some cameras, such as the QD6505P, only feature the pan and tilt functions, making them Pan-Tilt cameras. Throughout this manual we will refer to the PTZ operations. The basic operations are identical regardless of whether your camera has the zoom feature.

BEFORE YOU BEGIN


You will need:

1. A surge protector

We STRONGLY recommend that you use one that has the following specifications:

- UL-1449 Rated
- Clamping voltage of 330 or lower
- Joule rating of at least 400
- Response time of 10 nanoseconds or less

2. A small, Phillips-head screw driver to secure the control wires from the camera into the RS485 module on the Control Module.

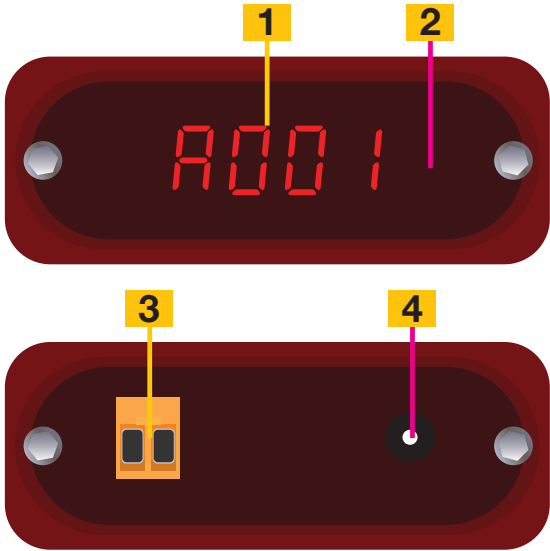
**NOTE!** If you have your DVR set to record when motion is detected, the movement of the PTZ camera will trigger recording as well as any alerts that you have set up, creating the potential for multiple false alarms. Depending upon your situation and specific needs, you should disable alarms, e-mail alerts and other notifications relating to motion detection for the specific channel that your PTZ camera is connected to. You may also wish to change the recording schedule, speed and/or quality for this channel to save disk space, if needed.

COMPONENTS & CONNECTIONS

The controller for your camera consists of two parts; the Remote Control, and the Control Module which contains the infrared receiver as well as a digital readout. The control wires from your camera connect to ports on the back of the module.

1.1 CONTROL MODULE

The Control Module receives the signals from the Remote Control and transmits control instructions to the camera through the wires connected to the RS485 block at the back of the module. The Control Module does not have any control over the video signal sent from the camera as that is delivered directly to the DVR or monitor. All settings are actually stored in the camera itself, the Control Module serves to communicate your instructions to your camera.



PICTURE 1-1

| # | Name | Description |
|---|---------------------------|--|
| 1 | LED ALPHA-NUMERIC DISPLAY | This digital readout displays information regarding camera address, preset point number, surveillance pattern number, etc. |
| 2 | IR RECEIVER | Receives commands from Remote. Located behind front faceplate. |
| 3 | RS485 PORT | Control wires from PTZ camera are connected here. |
| 4 | POWER INPUT | 12V power supply connects here. |

CONNECTING THE CONTROL MODULE

It is recommended that you test your camera near your DVR before mounting it in order to ensure that proper connections have been made and that everything is operating normally.

STEP 1. Connect the power/video/control extension cable to the camera according to the instructions in the camera’s manual. These are located in the section entitled “**Connecting the Camera.**”

STEP 2. Connect the power and the video leads on the opposite end of the extension cable to the power adapter and DVR or standalone monitor, respectively.

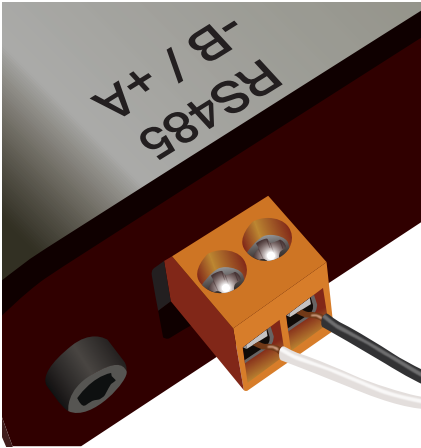
STEP 3. The bare metal control leads on the extension cable will need to connect to the orange RS485 block on the back of the Control Module.

This block can be unplugged from the Module if needed, but care must be taken while connecting the cables that the side with the screw heads is up to maintain proper orientation and to avoid connecting the wrong wire to the wrong port.

Use a Phillips-head screw driver to turn the screws counter-clockwise making sure that the ports are open.

At least one wire will be labeled. The white wire is the positive lead (also referred to as RS485A or “Y”) and it should be inserted into the left port. Use the screwdriver to close the jaws of the port until the wire is firmly attached. Repeat this procedure with the negative black (RS485B or “Z”) lead.

If you removed the orange RS485 block during the connection, plug it back into the Control Module at this time.



PICTURE 1-2

STEP 4. Plug the lead from the Control Module’s power adapter into the port on its back panel. It is recommended that this power supply be plugged into a UL-1449 rated surge protector to prevent damage in case of spikes of surges in power from the outlet.



IMPORTANT! We recommend connecting your camera and the Control Module to a UL-1449 rated surge protector. It should have a joule rating of at least 400, a response time of 10 nanoseconds or less and a clamping voltage of no more than 330 volts.

LED READOUT

When the Control Module is powered up, it will display one of two messages - **A001** or **P001**. The former indicates that the camera’s control address is 1, while the latter shows that the camera is at preset point number 1. These and other messages will be explained throughout the manual as they appear in operational instructions, but they are collected below for your convenience.



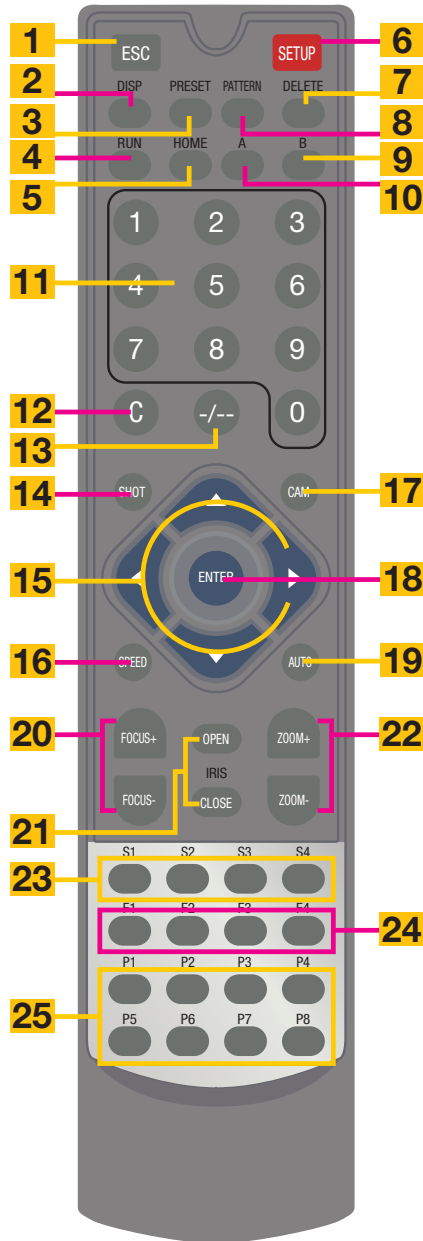
PICTURE 1-3

| Message | | Meaning |
|---------|-------------|--|
| A001 | A001 | Camera address is “1”. This address can be set (1-255) using the DIP switches inside the camera as described in the User Manual . If the address is changed, you will need to change the address in the Module using the Remote Control |
| Auto | Auto | Rotates the camera 360° starting and ending at the home point |
| CLR- | CLR | Clear. This indicates that you have cleared a setting using the Delete button on the remote. |
| d=24 | D=24 | D represents the Pelco-D communication protocol. 24 means 2400bps communication speed. This is the default setting for your camera. Like the address, protocol and speed are both set using DIP switches and the Module will need to be set as well. |
| HOME | Home | Points camera to its preset home point. |
| Lt-A | | Starting point for the auto pan function |
| Lt-b | | Ending point for the auto pan function |
| P001 | P001 | Preset point 1. You can set up to 80 points. |
| P=12 | P=12 | The camera is set to use the Pelco-P communication protocol at 1200bps |
| P-run | Pattern Run | Starts the camera moving through a surveillance pattern |
| PSTA | PSTA | The starting point of a surveillance pattern |
| PST0 | PST0 | The ending point of a surveillance pattern |
| S-63 | S-63 | Camera movement speed is set to 63 (the fastest setting) |
| SEt- | Set | Saves a preset point |
| U018 | U018 | The controller is using software Update version 18. |

1.2 REMOTE CONTROL

All of the commands and settings for your PTZ camera will be made using the remote that came with your camera. If you are connecting your camera to a DVR, the remote that came with that system will not work for controlling your camera.

| # | Button | Function |
|----|----------------------|--|
| 1 | Escape | Goes to address input mode |
| 2 | Display | Shows current settings |
| 3 | Preset | Press to create a preset point |
| 4 | Run | Run surveillance pattern |
| 5 | Home | Directs camera back to "home" point |
| 6 | Setup | Press to change baud rate |
| 7 | Delete | Clear preset point |
| 8 | Pattern | Create surveillance pattern |
| 9 | B | Mark start and end points for auto pan function |
| 10 | A | |
| 11 | Numbers | Enter numbers |
| 12 | Clear | Clears number entry |
| 13 | Multi-digit | Press before entering numbers with two or more digits |
| 14 | Shot | Press to go to preset point |
| 15 | Directional Controls | Moves the camera to desired position |
| 16 | Speed | Press and then enter desired speed (2-63) |
| 17 | Cam | Press to change camera address |
| 18 | Enter | Confirm selection/action |
| 19 | Auto | Spins camera 360° from home point |
| 20 | Focus | Camera automatically adjusts focus and light level. These are not usable with your camera. |
| 21 | Iris | |
| 22 | Zoom | Zoom in or out |
| 23 | Speed Shortcuts | Increase or decrease speed. S1=8, S2=40, S3=51, S4=63 |
| 24 | Focus Shortcuts | Not usable with this camera |
| 25 | Preset Shortcuts | Moves camera directly to preset points 1-8 |



PICTURE 1-4

OPERATION

2.1 SETTING ADDRESS AND PROTOCOL

It is possible to connect multiple PTZ cameras to the Control Module using the RS485 block on the back. However, each camera will need to have a distinct address - from 1 to 16 - in order to ensure that commands are being issued to the correct camera. In addition, both camera and Control Module must use the same communication protocol in order to interact. Both the camera and the Control Module can use the Pelco-D or Pelco-P protocols. The speed of this communication, called the baud rate, is also important as a lower communication speed allows control of the camera over longer distances. It should be noted, however, that in most applications a higher speed isn't a major factor. Each attached camera can use a different protocol and baud rate, if desired.

Your camera is set by default to an address of 1, with a baud rate of 2400 using the Pelco-D protocol. You should not need to change this except in unique circumstances, such as multiple cameras connected to a single Control Module.

If you need to change the default settings, you must do so both in the camera and on the Control Module. In the camera, they are made using DIP switches as covered in the **Setting Baud Rate and Address** section of the User Manual that came with your camera.

For the Control Module, these settings need to be changed to match those in the camera using the remote.

SETTING BAUD RATE AND PROTOCOL

Press the **DISP** button to show the current baud settings. Please note that you may have to push **DISP** multiple times to cycle through the various settings (speed, firmware version, etc.) to reach the baud settings. If the Control Module is set to the factory default, it will read d=24 meaning that it is set to use the Pelco-D protocol at 2400 bits per second (bps).

To change baud rate and protocol

STEP 1. Press and hold the **Setup** button for 3 seconds until you see the current baud rate settings, such as d=24



PICTURE 2-1

STEP 2. Press the up or down arrow key to switch between Pelco-D (d) and Pelco-P (P) protocols.

STEP 3. Use the left and right arrow keys to change the baud rate between 12/24/48/96.

STEP 4. Press **Enter** to save your setting.

Pressing and holding **C** while in the baud rate mode will blank the LED readout for 10 seconds and reset the Control Module back to Pelco-D at 2400bps.

To change address

STEP 1. Press the CAM button until it shows the address number, A=001

STEP 2. If the desired channel is 1-9, simply push that number on the remote. For addresses 10-16, you will need to press the “-/--” button before entering the two digits. You may press the **C** button to delete a digit.

STEP 3. If you are entering a two-digit address, you will need to press **Enter** after the second digit.

When the LED display is showing address information, clicking and holding Delete for three seconds will clear all addresses.

2.2 DIRECTIONAL CONTROLS

The most basic method for controlling the PTZ camera is by using the directional controls on the remote. The four, blue directional control buttons at the center of the remote allow you to move the camera both left and right as well as up and down. For horizontal movement, the camera can rotate in a full circle. Vertically, the camera only move between straight down and level. For cameras with the zoom function, the two buttons marked **Zoom+** and **Zoom-** allow you to magnify the target area by three times.

It should be noted that the other buttons in that area - the ones controlling Focus and Iris - do not function with these cameras. This is due to the fact that both cameras automatically focus on a subject and the automatic iris adjusts the level of light reaching the sensor without the need for manual input.

Using the directional controls will override any current automatically running operation of the camera.



PICTURE 2-2

2.3 OTHER CONTROLS

SPEED

The camera's movement speed can be adjusted from slowest (2) to fastest (63) by two methods:

1. Shortcut buttons - These buttons are located at the bottom of the remote. S1=8, S2=40, S3=51, S4=63
2. Pressing the **Speed** button and then entering the desired speed before pressing **Enter**.

AUTO

This will cause the camera to move to its Home Point (see next section) and begin rotating 360° until interrupted by another command from the Remote, such as pressing a directional button.

2.4 PROGRAMMING

The camera can be programmed to store preset points in which you save a specific position - including zoom, if applicable - for access later. In addition, you may also record a surveillance pattern with up to 16 stops that the camera will cycle through. It is this pattern which is most commonly used to automatically scan a wide area.

PRESET POINTS

The user is able to create up to 80 preset points which are stored in the memory of the Control Module. The first eight of these can be accessed with the touch of a single button at the bottom of the remote which will cause the camera to point at the desired location. The remaining preset points require the use of more than one button to access.

Setting a point

STEP 1. Using the directional buttons, point your camera to the desired location. Adjust the zoom if needed/available.

STEP 2. Press and hold the **Preset** button for approximately 3 seconds until the **SE-** message appears.

STEP 3. Enter the number for this preset.

If the number is higher than nine, you will need to press the “-/--” button before entering the two digits (up to 80) and then press **Enter**.

Home point

This is essentially Preset Point #0. This is the point that the camera will return to when you press the **Home** button. It differs from the other preset points by being the starting and ending point for a 360-degree rotation of the camera when the **Scan** button is pressed. The camera will retain any zoom settings set for the home point during its rotation.

Setting the Home point is identical to the procedure used to set any other preset point above, except that once the **SE-** message appears, you should press the **Home** button rather than a number. The Control Module's LED readout will display **HOME**, to indicate that it has been set.

Clearing a preset point

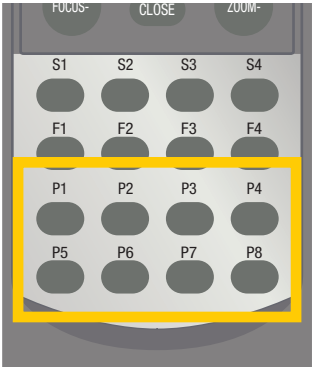
You may overwrite a preset point by positioning the camera to a different location and then assigning it the same number as the point you want to delete. Or, you may go to the preset point and then press and hold the **DELETE** button for about three seconds until the message **CLR-** appears on the Control Module.

You may clear ALL of the preset points by following the instructions for setting a preset point and entering **95**. This cannot be undone.

Going to a preset point

Once you've set your preset points, you can use the remote to direct the camera to those spots. For preset points 1 through 8, you will only need to push the appropriate **Shortcut** button labeled P1 through P8 at the bottom of the remote.

To point your camera at preset points 9 through 80, you will need to follow these steps:



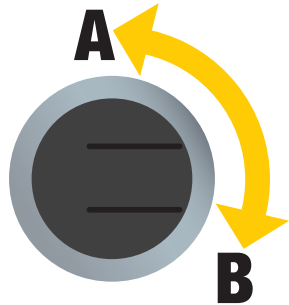
PICTURE 2-3

- STEP 1. Press the **Shot** button.
- STEP 2. Press press the “-/--” button.
- STEP 3. Enter the two-digit preset point number.
- STEP 4. Press **Enter**.

The camera can be directed to the Home point by using the **Home** button located at the top of the remote.

AUTO PAN

You can set up your camera to constantly move back and forth between two points. This action, called an auto pan, can be useful in surveying a wider area than can be seen by a single camera, for example. The two points can have different focus settings (if applicable).



PICTURE 2-4

- STEP 1. Position the camera at the desired starting point.
- STEP 2. Press and hold the **Preset** button for approximately 3 seconds until the **SE-** message appears.
- STEP 3. Press the **A** button at the top of the remote. The message **L E - A** will appear.
- STEP 4. Repeat for the end point, using the **B** button this time.
- STEP 5. Press **A** to begin the pan.

Pressing **B** will cause the camera to pan in the opposite direction, skipping the area covered by the other pan. Pressing any directional key will stop a pan cycle. Points A and B be reset as needed.

SCAN

The scan pattern is simply a 360-degree horizontal rotation of the camera based on the position - and zoom settings - of the Home point (see above.)

SURVEILLANCE PATTERN

You can create a surveillance pattern that will be recorded by the camera for it to follow. It does not use any of the preset points you may have created, but rather copies the exact motions of the initial pattern. This includes pauses at selected points. If, for example, your initial pattern includes a pause for 10 seconds at a particular spot, the pattern will include a 10-second delay at that point. You may have up to 16 points along the pattern. You do not have to end the pattern at the same position from which you began as the camera will return to the starting point to repeat the pattern.

Setting a pattern

- STEP 1. Press and hold the **Pattern** button until the LED display reads **PSLR**
- STEP 2. Create your surveillance pattern by directing your camera as desired.
- STEP 3. When you have finished your pattern, press and hold the **Pattern** button again until the LED display reads **PSLO**
- STEP 4. Press **Enter** to save your pattern.

Press the **Run** button to have your camera begin the surveillance pattern. The LED display will read the **PRUN** message to indicate that it is running your pattern. You may override and interrupt the pattern at any time by pressing a directional control, zoom or Preset shortcut button.

2.5 SPECIAL FUNCTIONS

There are several additional functions which are saved as presets and which can be accessed in the same manner:

- Press **Shot**
- Press **-/--**
- Enter function number
- Press **Enter**

| Preset | Operation |
|--------|--|
| 93 | Camera pans 360° before reversing and panning 360° again |
| 97 | |
| 94 | Clears all settings except presets |
| 95 | Clears all settings including presets |

After you press Enter, the function will take place.

APPENDIX

TROUBLESHOOTING

| Symptom | Solution |
|--|---|
| <i>Cannot control camera.</i> | <p>Check that the RS485 wires are securely connected and in the proper ports.</p> <p>Check that settings for protocol, baud rate and address match those set within the camera.</p> |
| <i>Focus, Iris and Zoom functions do not work.</i> | <p>Iris and focus functions are handled automatically by the camera. The QD6505P camera does not have a zoom lens.</p> |
| <i>Buttons F1 through F4 are non-functional.</i> | <p>These buttons are focus shortcuts and are not supported by your camera.</p> |
| <i>Remote buttons not working.</i> | <p>Ensure that batteries are properly aligned in remote.</p> <p>Replace AAA batteries in remote.</p> <p>Make sure that Control Module front panel is not blocked.</p> |

WARRANTY

Q-See is proud to back all of our products with a conditional service warranty covering all hardware for 12 months from the date of purchase. Additionally, our products also come with a free exchange policy that covers all manufacturing defects for one month from the date of purchase. Permanent upgrading service is provided for the software.

Liability Exclusions:

Any product malfunction or abnormalities in operation or damage caused by the following reasons are not within the free service scope of our company:

1. Equipment damage caused by improper operation.
2. Improper equipment operation environment and conditions (e.g., improper power, extreme environmental temperatures, humidity, lightning and sudden surges of electricity).
3. Damage caused by acts of nature (e.g., earthquake, fire, etc).
4. Equipment damage caused by the maintenance of personnel not authorized by Q-See.
5. Product sold over 12 months ago.

In order to fulfill the terms of your warranty, you must complete the registration process after purchasing our product. To do this, simply fill out the User's Information Card on our website at <http://q-see.com/support/registration-form.php>

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